

**WHAT IS CLAIMED IS:**

1. A chamber for processing residual gas, comprising:
  - a residual gas inlet mechanism for receiving residual gas;
  - 5 at least one first gas inlet mechanism for receiving inert gas;
  - at least one second gas inlet mechanism for receiving a reactive gas;
  - at least one baffle for increasing a path of gas flow; and
  - a gas outlet mechanism for outputting mixed gases from mixing the residual gas, inert gas and reactive gas and non-reacted residual gas, inert gas and reactive gas.
- 10 2. The chamber as claimed in claim 1, wherein the inert gas includes nitrogen.
3. The chamber as claimed in claim 1, wherein the reactive gas is clean dry air.
- 5 4. The chamber as claimed in claim 1 further comprising a wet scrubber connected to the chamber.
5. The chamber as claimed in claim 4, wherein one end of the gas outlet mechanism connects with the wet scrubber.
- 20 6. The chamber as claimed in claim 1, further comprising a powder-collection apparatus coupled to the chamber.

7. The chamber as claimed in claim 1 further comprising a plurality of baffles for increasing a time the residual gas is in contact with the reactive gas.
8. The chamber as claimed in claim 6, wherein the powder-collection apparatus  
5 includes at least one gate.
9. The chamber as claimed in claim 8, wherein the at least one gate can be selectively opened and closed during an operation of the chamber.
- 10 10. The system as claimed in claim 1, further comprising a pressure meter connected to the chamber for monitoring a pressure inside the chamber.
11. The system as claimed in claim 1, further comprising a water-cooling pipe for reducing heat resulted from an operation of the chamber.
- 15 12. A system for processing residual gas, comprising:  
a chamber having at least one baffle for increasing gas flow path;  
a residual gas inlet mechanism connected to the chamber for supplying residual gas to the chamber;  
20 at least one first gas inlet mechanism connected to the chamber for supplying inert gas to the chamber;

at least one second gas inlet mechanism connected to the chamber for supplying a reactive gas to the chamber; and

a gas outlet mechanism for connected to the chamber for outputting mixed gases from mixing the residual gas, inert gas and reactive gas and non-reacted residual gas, inert gas and reactive gas.

13. The system as claimed in claim 12 further comprising a wet scrubber connected to the chamber.

14. The chamber as claimed in claim 12, further comprising a powder-collection apparatus coupled to the chamber.

15. The chamber as claimed in claim 14, wherein the powder-collection apparatus includes at least one gate.

16. A method for processing residual gas, comprising:

providing a chamber;

introducing residual gas into the chamber, the residual gas having a first toxic level;

diluting the residual gas;

introducing a reactive gas into the chamber to cause a reaction between the diluted residual gas and reactive gas to produce a mixed gas; and

outputting the mixed gas from the chamber, the mixed gas having a toxic level lower than the first toxic level.

17. The method as claimed in claim 16, further comprising a step of exhausting  
5 the residual gas, the inert gas and the mixed gas from a gas outlet mechanism into a wet scrubber.

18. The method as claimed in claim 16, further comprising a step of providing a powder-collection apparatus to collect residues produced by the reaction of the  
10 residual gas, the inert gas and the reactive gas in the chamber.

19. The method as claimed in claim 16, further comprising a step of providing at least one baffle in the chamber to increase the path traveled by the diluted residual gas and reactive gas in the chamber.

20. The method as claimed in claim 1, further comprising a step of cooling the  
15 chamber with a water-cooling pipe.